

# PATENT ABSTRACTS OF JAPAN

(11)Publication number : 64-009895

(43)Date of publication of application : 13.01.1989

(51)Int.Cl. C30B 29/40  
C30B 25/14  
// H01L 21/205

(21)Application number : 62-165694

(71)Applicant : NEC CORP

(22)Date of filing : 01.07.1987

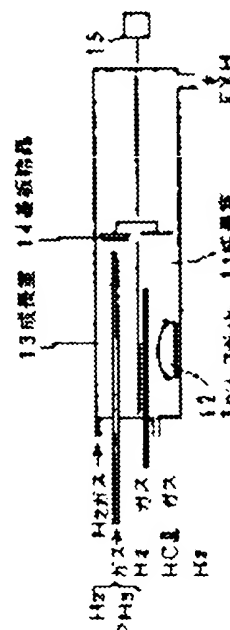
(72)Inventor : MATSUMOTO TAKU

## (54) METHOD FOR GROWING III-V COMPOUND SEMICONDUCTOR CRYSTAL ON SI SUBSTRATE

### (57)Abstract:

**PURPOSE:** To form the titled superconductor crystal, having good crystallinity and capable of selective growth on a substrate, by alternately feeding a gas species containing In chloride and a gas species containing a group V constituent element onto a silicon substrate having a formed mask pattern.

**CONSTITUTION:** An In source boat 12 is placed on the upstream side of a growth chamber 11 in the lower stage and a carrier gas and HCl gas are fed from the upstream side thereof to adsorb the formed In chloride on a silicon substrate 14 having a formed mask pattern. The substrate 14 is then moved to a growth chamber 13 in the upper stage and a gas species containing a group V constituent element is fed and adsorbed on the substrate 14. The above-mentioned operations are alternately repeated to carry out atomic layer epitaxial growth of a III-V compound semiconductor crystal on the substrate 14.



## LEGAL STATUS

[Date of request for examination]

[Date of sending the examiner's decision of rejection]

[Kind of final disposal of application other than the examiner's decision of rejection or application converted registration]

[Date of final disposal for application]

[Patent number]

[Date of registration]

[Number of appeal against examiner's decision of rejection]

[Date of requesting appeal against examiner's decision of rejection]

[Date of extinction of right]